

## COURSE OUTLINE

Week No.	Week of..	Topic	Griffiths 9.1-9.3 9.4 9.4 9.5	Pedrotti 10.1 10.1 10.2 10.3 10.3 12 12 12	Problem Set No. 1 2 3 4 5 6 7 14 14 10,12	Due at 5 PM on.. 25-Jan 1-Feb 8-Feb 15-Feb 22-Feb 1-Mar 8-Mar  8-Apr 5-Apr 9 12-Apr 10 19-Apr 11 12 13 14 15 16 17
1	15-Jan	MARTIN LUTHER KING HOLIDAY				
	17-Jan	FIRST LECTURE (review EM waves)				
		EM waves in conductors; mirrors	9.4			
2	22-Jan	Driven oscillator model for $n(\omega)$	9.4			
		Waveguides	9.5			
		Lumped-element circuits			1	25-Jan
3	29-Jan	Alternating-current networks				
		Scalar and vector potentials	10.1			
		Lorentz and Coulomb gauge	10.1		2	1-Feb
4	5-Feb	Retarded potentials	10.2			
		Liénard-Wiechert potentials	10.3			
		Fields of a moving point charge	10.3		3	8-Feb
5	12-Feb	Special relativity	12			
		Special relativity	12			
		Special relativity	12		4	15-Feb
6	19-Feb	PRESIDENTS' HOLIDAY				
		Special relativity	12			
		Special relativity	12		5	22-Feb
7	26-Feb	Special relativity	12			
		Special relativity	12			
		Special relativity	12		6	1-Mar
8	5-Mar	Multipole radiation	11.1			
		Multipole radiation	11.1			
		Radiation by a point charge	11.2		7	8-Mar
9	12-Mar	Radiation by a point charge	11.2			
		Bremsstrahlung and synchrotron radiation	11.2			
		Cherenkov and transition radiation				
10	19-Mar	Matrix analysis of polarization		14		
	20-Mar	80-min <b>Midterm Exam</b> , Tu 5:10-6:30 PM				
		Matrix analysis of polarization	14			
		Interference and coherence	10,12			
	26-Mar	SPRING RECESS				
11	2-Apr	Interference and coherence	10,12			
		Interference and coherence	10,12			
		Multiple reflections	11,19		8	5-Apr
12	9-Apr	Multiple reflections	11,19			
		Fraunhofer diffraction	16			
		Fraunhofer diffraction	16		9	12-Apr
13	16-Apr	Diffraction grating	17			
		Fourier optics	25			
		Fourier optics	25		10	19-Apr
14	23-Apr	Fresnel diffraction	18			
		Holograms	13			
		Holograms	13		11	26-Apr
15	30-Apr	Lasers	21,22			
		Lasers	21,22			
		Lasers	21,22		12	3-May
16	7-May	LAST LECTURE (review)				
	11-May	Final examinations begin				
17	14-May	180-minute <b>Final Exam</b> , M 8-11 AM				
	19-May	Final examinations end				